72. (Previously Presented) The circuit of claim 69, wherein the spreading is effectively not performed when the data rate of the data stream reaches a particular threshold data rate.

REMARKS

Claims 1-22, 35-39, and 53-72 are pending in the present application. No claims are being amended.

I. Claim Rejections – 35 USC § 103

a. Claims 1-2, 6-7, 10-12, 14-21, 35-36, 38-39

The Examiner rejected claims 1-2, 6-7, 10-12, 14-21, 35-36, 38-39 under 35 U.S.C. §103(a) as allegedly being unpatentable in view of Sakoda (US Patent No. 6,519,292) in view of Mirfakhaei (US Patent No. 6,570,912) and Van Nee (US Patent No. 6,175,550). This rejection is traversed as follows.

The basic requirements of a prima facie case of obviousness under 35 USC § 103 are: (1) there must be some suggestion or motivation to modify the reference or to combine the reference teachings; (2) there must be a reasonable expectation of success in modifying the reference or combining the references; and (3) the prior art must teach or suggest all the claim limitations. MPEP § 2143.

There is no suggestion or motivation to combine Sakoda and Van Nee, at least because the proposed modification would render Sakoda unsatisfactory for its intended purpose. *See* MPEP § 2143.01, subsection V; *see also In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

Sakoda discloses that a "transmitting circuit 108 ... amplifies the signal S106 to a predetermined power." (Col. 19, lines 14-22). This amplification is varied by "control section 102" which "stepwise increases transmission power by controlling the transmitting circuit 108." (Col. 20, lines 9-11). The controller increases the transmission power from "a" then to "2a" then again to "3a" and finally to "4a", "instead of jumping straight to a final power level "4a". (Col. 20, lines 9-41). The gain is scaled gradually from "a" to "4a" specifically for the purpose of gradually introducing new system users to a given base station and the corresponding radio frequency environment. Specifically, Sakoda states:

> "[I]f communication is suddenly started at a transmission rate desired by a user from the beginning of establishment of a communication channel ... the transmission power must be increased correspondingly to the number of channels

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> used. ... Moreover, in this case, a time lag occurs in mobile station before the transmission power is increased correspondingly to a power-up command sent from a base station. Thereby, a problem occurs that the communication between the base station and a portable telephone is instantaneously broken." (Col. 6, lines 41-54).

Thus, Sakoda requires stepwise increasing the data rate for the purpose of giving existing system users time to increase their power to account for the increased noise (from the perspective of the existing users) caused by a new user.

Modifying Sakoda as Van Nee teaches would render Sakoda unsatisfactory for its intended purpose. Van Nee discloses in pertinent part "the receiver 30 provides feedback to the dynamic control circuitry 15 of the transmitter 10 of the receiving station 72 or 74 to dynamically scale the operating characteristics and/or parameters, such as the data rate, between the two stations." (Col. 8, lines 1-5). To dynamically scale the data rate based on feedback would render Sakoda unsatisfactory for the stated purpose of stepwise increasing the gain in order to avoid causing too much noise for existing system users.

For at least the above reason, the combination of Sakoda with the teachings of Van Nee is not proper, and claims 1-2, 6-7, 10-12, 14-21, 35-36, 38-39 should be allowable for at least this reason.

There is no suggestion or motivation to combine Sakoda and Van Nee, for at least the following additional reason: the proposed modification would change the principle of operation of Sakoda. *See* MPEP § 2143.01, subsection VI; *see also In re Ratti*, 270 F.2d 810 (CCPA 1959).

As stated above, the principle of operation of Sakoda is that gain is stepwise scaled up in order to give existing system users time to increase their gains to account for the increased noise of the new user. Modifying Sakoda with Van Nee would change this principle of operation. Namely, the principle of operation of Van Nee is to "dynamically scale the operating characteristics and/or parameters, such as data rate, between the stations 72 or 74." (Col. 8, lines 13-15). The "dynamically scaling" of Van Nee is a principle of operation not consistent with the "stepwise scaling" principle of operation of Sakoda.

For at least the above additional reason, the combination of Sakoda with the teachings of Van Nee is not proper, and claims 1-2, 6-7, 10-12, 14-21, 35-36, 38-39 should be allowable for at least this reason.

Further, the office action gives no reason to believe that there is a reasonable likelihood of success of combining Sakoda and Van Nee, the second prong of an obviousness rejection. MPEP § 2143 and § 2143.02. As described above, modifying Sakoda with the teachings of Van Nee would render Sakoda inoperable for its intending purpose and would change its principle of operation. Given these problems of combining Sakoda and Van Nee, a reasonable likelihood for success is not at all apparent. Contrarily, it is only by looking at the invention itself (an impermissible use of hindsight), that one can conceive of how some of the principles of Sakoda and Van Nee could be combined.

Further, Applicants submit that neither Sakoda nor Van Nee nor Mirfakhraei disclose the claimed subject matter of "scaling the stream of OFDM symbols in accordance with a particular gain selected for the data stream, wherein the particular gain is based upon an estimated signal quality". (Claim 1). This element of claim 1 is not disclosed, because the gain in Sakoda is based upon a desired data rate and gain is not suggested to be scaled in Van Nee.

Therefore, since the combination of Sakoda and Van Nee is improper, and the modification of Sakoda to dynamically scale gain would change the principle of operation of Sakoda and render it non-functional, the references do not teach each and every limitation of claims 1-2, 6-7, 10-12, 14-21, 35-36, 38-39.

B. Claims 3-5, 22 and 37

Claims 3-5, 22 and 37 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sakoda in view of Mirfakhraei and in further view of Van Nee and Jankiraman (IEEE).

Claims 3-5 depend from claim 1 and are therefore allowable for at least the same reasons as discussed with respect to claim 1. Jankiraman does not cure any of the problems described above with respect to the rejection of claim 1.

Claim 22 is a method claim including all of the steps of claim 1, plus additional steps. Therefore, claim 22 is allowable for at least the reasons described above with respect to claim 1. Jankiraman does not cure any of the problems described above with respect to the rejection of claim 1.

Claim 37 depends from claim 35. Claim 35 is a device claim directed to a transmitter capable of performing all of the steps of claim 1. Accordingly, claims 35 and 37 are allowable for

at least the reasons discussed above with respect to claim 1. Jankiraman does not cure any of the problems described above with respect to the rejection of claim 1.

C. Claim 8

Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Sakoda in view of Mirfakhraei and in further view of Linz (U.S. Patent No. 6,219,377).

Claim 8 depends from claim 1 and is therefore allowable for at least the same reasons as discussed with respect to claim 1. Linz does not cure any of the problems described above with respect to the rejection of claim 1.

D. Claims 9 and 13

Claims 9 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sakoda in view of Mirfakhraei and in further view of Van Nee and Kalofonos (IEEE).

Claims 9 and 13 depends from claim 1 and are therefore allowable for at least the same reasons as discussed with respect to claim 1. Kalofonos does not cure any of the problems described above with respect to the rejection of claim 1.

E. Claims 53-55, 57-65 and 67-72

Claims 53-55, 57-65 and 67-72 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sakoda in view of Van Nee.

Claims 53 claims a method similar to claim 1 except that in claim 53 the gain is based more generally on information regarding a communication channel rather than on an estimate signal quality as in claim 1. This does not change any of the reasons for allowability given above with respect to claim 1. Accordingly, claim 53 is allowable for at least the reasons given above with respect to claim 1.

Claims 54-55, 57-65 and 67-72 depend from claim 53 and are therefore allowable for at least the reasons given above with respect to claim 53.

F. Claims 56 and 66

Claims 56 and 66 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sakoda in view of Van Nee and in further view of Kalofonos.

Claims 56 and 66 depends from claim 53 and are therefore allowable for at least the same reasons as discussed above with respect to claim 53. Kalofonos does not cure any of the problems described above with respect to the rejection of claim 1.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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